

## MEAN LAKE LEVELS DURING JANUARY, 1922.

By UNITED STATES LAKE SURVEY.

[Detroit, Mich., Feb. 6, 1922.]

The following data are reported in the "Notice to Mariners" of the above date:

Data.	Lakes.*			
	Superior.	Michigan and Huron.	Erie.	Ontario.
Mean level during January, 1922:				
Above mean sea level at New York.....	Feet. 601.62	Feet. 579.32	Feet. 571.51	Feet. 244.73
Above or below—				
Mean stage of December, 1921.....	—0.37	—0.22	—0.20	—0.10
Mean stage of January, 1921.....	—0.46	—0.60	—0.48	—0.81
Average stage for January, last 10 years.....	—0.52	—0.70	—0.21	—0.76
Highest recorded, January stage.....	—1.16	—3.35	—2.04	—2.87
Lowest recorded January stage.....	+0.74	+0.24	+0.55	+0.93
Average relation of the January level to:				
December level.....		—0.20	—0.10	0.00
February level.....		0.00	+0.10	0.00

\* Lake St. Clair's level: In January, 573.93 feet.

## EFFECT OF WEATHER ON CROPS AND FARMING OPERATIONS, JANUARY, 1922.

J. WARREN SMITH, Meteorologist.

The month of January, 1922, was persistently cold west of the Rocky Mountains, while temperatures varied greatly from week to week in the Central and Eastern States. The month was mostly favorable for the usual mid-winter outdoor operations, except for the cold weather in the West, and during the last 10 days in the Northwest.

Much less than the usual amount of snow fell in the principal winter-wheat States, the ground being bare during most of the month, but extremely heavy snowfall was experienced in the Middle Atlantic States, and moderately heavy falls in the Northeast. Grain fields

were mostly well protected by snow-cover in the far Northwestern States during the periods of severely cold weather. In the absence of snow protection, winter grains were somewhat adversely affected by alternate thawing and freezing in the Ohio Valley States, but no extensive harm was reported. Very little precipitation occurred from Kansas and eastern Colorado southward and severe drought prevailed in that area which was very unfavorable for winter grains.

Comparatively mild weather favored the development of winter truck in the South, although there was some local frost injury in the more southeastern districts during the latter part of the month, and much damage was done in California to many winter crops. Much of the potato crop was planted in Florida the last half of the month under generally favorable weather conditions. Field work was interrupted by frequent rains in some Southern States, especially during the latter part of the month.

The unusually cold weather from the Rocky Mountains westward was unfavorable for stock, and heavy feeding was necessary in many localities, with considerable loss and shrinkage. Stock water continued scarce in dry southwestern districts, although the general precipitation from southern Arizona westward during the last week of the month was beneficial, and there was sufficient moisture to improve ranges in much of Texas and New Mexico.

The month was generally favorable for fruit, except for the severe freeze in California. The worst freeze in many years occurred in that State about the 20th and great damage was done to citrus fruits, especially where orchards were unprotected. Orchardists were given timely warning of the approaching freeze and a vast quantity of fruit was saved by heating. The colder weather the latter part of the month was favorable in Southeastern States in retarding premature development of deciduous fruit bloom. Berries were plentiful in Florida at the close of the month.